

JUL 28 2010

Application Serial No. 10/577,017
Reply to final office action of April 28, 2010

PATENT
Docket: CU-4798

Remarks and Arguments

Reconsideration is respectfully requested.

Claims 1-3, 5-18 are pending in the present application before this amendment. By the present amendment, previously withdrawn claims 13-15 have been canceled without prejudice; 1, 2, 5, and 16 have been amended; and new claims 19-21 has been added. No new matter has been added. No excess claim fee is deemed necessary as the total number of claims remains unchanged by the present amendment.

In the office action (page 2), claim 5 is rejected under 35 U.S.C. §112, ¶2 as being indefinite as there is insufficient antecedent basis for "the electronic." In response, the applicants have amended claim 5 to recite --the electronic device-- to correct an inadvertent typographical error, and overcome the grounds for rejection. Withdrawal of the aforementioned rejection is respectfully requested accordingly.

In the office action (page 2), claims 1-3, 6, 8-9, 11, 16 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0084781 (Ahn) in view of U.S. Patent Application Publication No. 2003/0038415 (Anderson). The "et al." suffix is omitted in a reference name.

Claim 1 now recites the features of: "said electronic element having a top principal surface in direct contact with said lower principal surface of said interposer, said electronic element carrying said plurality of electrodes respectively in correspondence to said plurality of post electrodes in a state buried in said electronic element, said plurality of electrodes being exposed at said top principal surface of said electronic element and in contact with corresponding bottom ends of said plurality of post electrodes, said plurality of electrodes forming a flush surface with said top principal surface of said electronic element"; "a rewiring layer being formed upon said top end of said post electrode in electrical connection therewith"; and "an external connection terminal being formed on a top surface of said rewiring layer." With regard to the features of "a rewiring layer being formed upon said top end of said post electrode in electrical connection therewith: and "an external connection terminal being formed on a top surface of said rewiring layer", support for these features is found throughout the specification, and at least in the specification page 27, lines 7-9, page

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28, lines 5-8; and FIGS. 4B,D; thus no new matter has been added.

According to embodiments of the present invention, since the rewiring layers 23 are formed directly on the upper ends of the post electrodes 22A, good electrical connections are established between the post electrodes 22A and the rewiring layers 23 (specification page 27, lines 7-11; FIG. 4D). Further, as shown in FIG. 4D, the external connection terminals 24 are disposed in the openings 37 and joined to the rewiring layers by heat treatment (specification page 28, lines 5-8).

The applicants respectfully submit that the cited references are silent with regard to these features. Specifically, Ahn FIGS. 1A-B as cited by the office do not show the above features of the amended claim 1. The office alleges that Ahn's electrical connections 135 and electrical couplings 131 disclose the claimed post electrodes and electrodes, respectively. However, as clearly shown in Ahn's FIG. 1B, the electrical couplings 131 are not formed such that --said plurality of electrodes forming a flush surface with said top principal surface of said electronic element-- as recited in claim 1 as amended above. Similarly, nowhere in Ahn shows --an external connection terminal being formed on a top surface of said rewiring layer-- as recited in claim 1 as amended above.

The applicants respectfully submit that Anderson fails to cure the above deficiencies, and therefore the applicants respectfully submit that the cited references, whether considered alone or in combination, fail to teach or even suggest each and every feature of the presently claimed invention of claim 1. Accordingly, the applicants respectfully request withdrawal of the aforementioned rejections and earnestly solicit an indication of allowable subject matter with respect to claim 1.

With regard to claims 2 and 16, the applicants have amended these claims to recite the above features, and therefore respectfully submit that these claims should be allowable over the combination of Ahn and Anderson for the reasons above. Accordingly, the applicants respectfully request withdrawal of the aforementioned rejection and earnestly solicit an indication of allowable subject matter with respect to these claims.

Additionally, new claims 19-21 have been added. Support for these claims is found throughout the specification and at least in the specification page 27, lines 7-9,

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page 28, lines 5-8; and FIGS. 4B,D; thus no new matter has been added. These claims recite additional features better clarifying the distinctions identified above, and therefore should be allowable for the above reasons.

In the office action (page 5), claims 5, 7, and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ahn in view of Anderson, in view of U.S. Patent Application Publication No. 2004/0070064 (Yamane).

In the office action (page 6), claim 12 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Ahn in view of Anderson, and further in view of U.S. Publication No. 2004/0150104 (Terui).

In the office action (page 6), the examiner rejects claim 17 under 35 U.S.C. §103(a) as being unpatentable over Ahn in view of Anderson, and further in view of U.S. Publication No. 2003/0185484 (Chakravorty et al).

With regard to claims 3, 5-12, and 17-21; the applicants respectfully submit that these claims should be allowable at least on virtue of their dependence on one of claims 1, 2, and 16, and also for the additional features recited therein.

For the reasons set forth above, the applicants respectfully submits that claims 1-3, 5-12 and 16-21, now pending in this application, are in condition for allowance over the cited references. Accordingly, the applicants respectfully requests reconsideration and withdrawal of the outstanding rejections and earnestly solicits an indication of allowable subject matter. This amendment is considered to be responsive to all points raised in the office action.

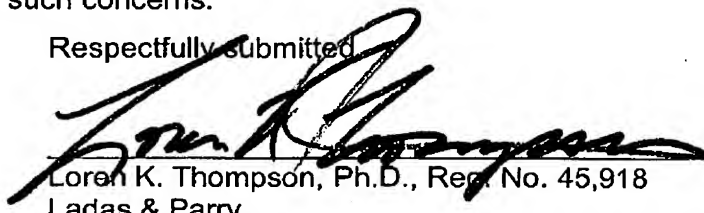
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When issuance of a Notice of Allowance is proper in the next action, the examiner is authorized to cancel the withdrawn claims, for which the applicant reserves the right to file a divisional application. Should the examiner have any remaining questions or concerns, the examiner is encouraged to contact the undersigned attorney by telephone to expeditiously resolve such concerns.

Respectfully submitted,

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